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## **HUNGARY: SMALL VILLAGES IN SPACE AND TIME**

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### **1. INTRODUCTION**

By and large a decade has passed since attention has been turned to small villages after the frenzy about "homesteads"; one might as well say that minuscule villages have come into vogue, considering the number of articles published about them. Both newspaper articles and scientific papers have addressed the issue and slowly but surely a picture solidified in the public mind about the ageing population of "inviably sized" villages, fighting against extinction. The practical implementation of the concept about the development of settlements reinforced this feeling; the overall atmosphere is correctly characterized by the fact that the blanket name for such villages that were originally termed as "villages without any central role" was soon turned around to "villages without role" and not only in careless speech. So, those feeling the full impact of the settlement policy practices started a fight against this defamatory qualifier which, they felt, was sprung on them officially.

The new guide-lines, endorsed towards the middle of the 1980s, about regional and town development lay special emphasis on the problems of small villages. This was followed by a reform (which started rather vehemently but petered out towards actual implementation) affecting the redistribution of development resources on the one hand, while a special central fund was created for the development of regions declared officially to be disadvantaged, affecting the counties where this problem was more acute than elsewhere.

Thus, the problem of minuscule villages cannot be termed either as unexplored or unnoticed by official politics. Nevertheless it seems it is worthwhile to turn to figures to do a little analysis so that attention could be called to some long-term and sus-

tained relationships. To be able to do so, the issue of small villages has to be fitted into the overall concept about towns and other settlements.

## 2. LONG-TERM TENDENCIES IN THE DEVELOPMENT OF THE TOWN PATTERN

Once a theme in vogue, people are liable to think that the phenomenon under discussion is something new.

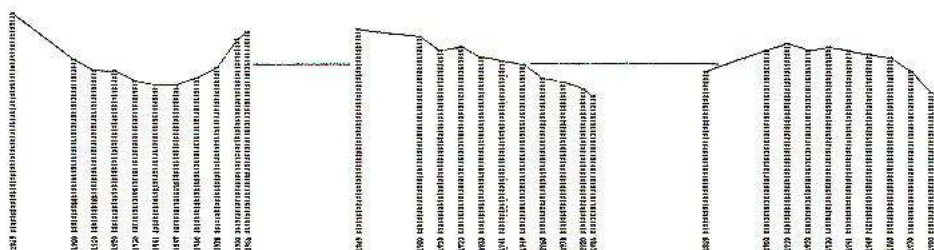
We have had a chance to study all the settlements of different sizes, classified into different categories on the basis of their population, ever located on the current territory of Hungary, using data accumulated over the past 120 years. [1], [2], [3]

To begin with, the changes in the number of settlement and in their total population over time in all categories were compared against the relative averages in their own categories. (The data are listed in the Annex (*Tables 1 through 8.*)). Since fairly similar tendencies were observed in respect of the number of town and population numbers, it was though sufficient to indicate changes in population over time, using the graphs in *Figure 1*. The horizontal axis represents time from 1869 till 1986.

Typical differences have been found in the development tendencies of the populations of towns with differences sizes. A characteristic feature for the medium category of settlements (see *Figures 1/C through 1/F*) is that sometime during the 20th century the number of people living there had already had its peak. To be more specific, after an earlier rise in population, the number of dwellers in settlements with an average population, between 1,000 to 2,000 is falling since World War I, while that in settlements with an average population between 2,000 to 10,000 is falling since 1960, whereas reduction in population numbers in towns with averages between 10,000 to 20,000 is noticeable since 1980 only, which is the exact date when the total population of Hungary began to fall, too. (See *Figure 1/I*)

In the category of bigger towns, the population of Budapest grew with the greatest dynamism between the Compromise in 1867 and World War II, although the growth dynamism of settlements with a population over 20,000, the number of dwellers jumped up after WW II and the growth rate has not diminished a wink ever since (See *Figures 1/G and 1/H*).

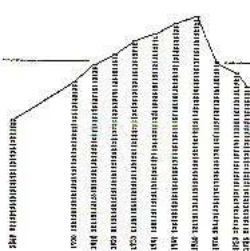
As for the categories of small settlements, both the number and the dwellers of those with a population below 1,000 was falling in the last 30 years of the 19<sup>th</sup> century; since the time, however, that larger settlements began to fell behind, more and more settlements have sunk into the category of minuscule settlements from above. At first, this slowed down contraction, and on the contrary, the number of settlements with a population below 500 people as well as the total number of people living in such settlements has been on the rise since WW II. (See *Figure 1/A*).



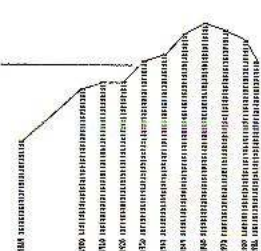
**Fig.1/A**  
Changes in the total population of settlements with less than 500 people

**Fig.1/B**  
Changes in the total population of settlements with 500-1000 people

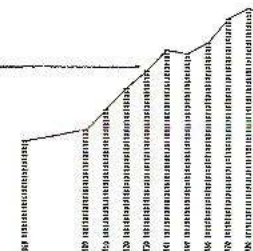
**Fig.1/C**  
Changes in the total population of settlements with 1000-2000 people



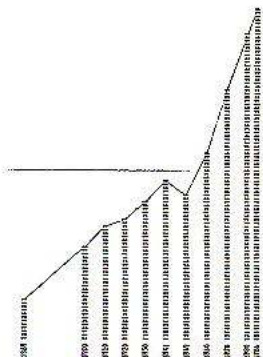
**Fig.1/D**  
Changes in the total population of settlements with 2000-5000 people



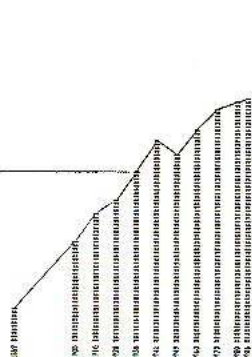
**Fig.1/E**  
Changes in the total population of settlements with 5000-10000 people



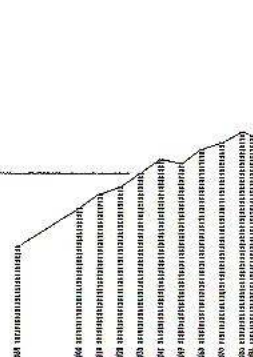
**Fig.1/F**  
Changes in the total population of settlements with 10000-20000 people



**Fig.1/G**  
Changes in the total population of settlements with more than 20000 people (Budapest not included)



**Fig.1/H**  
Changes in the population of Budapest



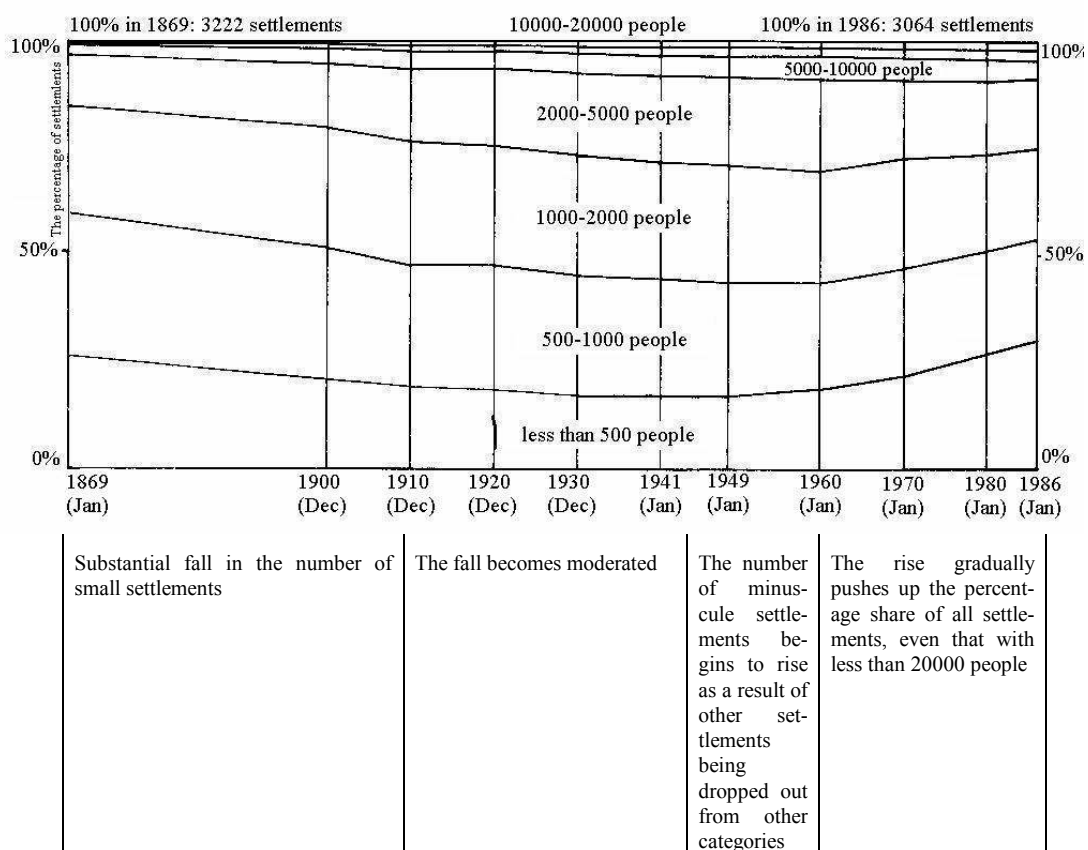
**Fig.1/I**  
Changes in the population of Hungary (current area)

Source: Data from the Central Statistical Office.

Baseline: The average of the 120 years in the respective categories

**Figure 1. Changes in the population of settlement categories between 1869 - 1986**

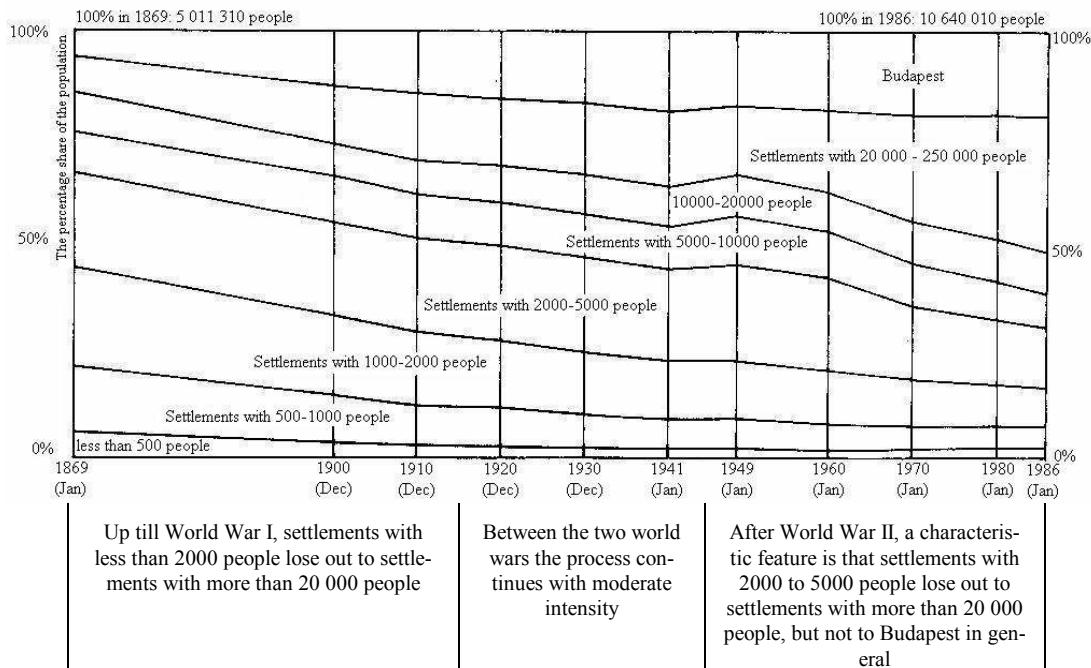
The combined impact of the phenomenon can be described even more palpably if the cumulative curves of the individual settlement categories are looked at (thereby comparing the data of settlements in given category against those in a category below).



**Figure 2. The Number of Settlements in the Respective Population Categories Over the Current Territory of Hungary**

In *Figure 2* the limit lines indicate the percentage of settlement below the limit at a given time against the total number of settlements. We have already seen that all the settlements with population numbers below 2,000 have been characterized by a rapid, then a gradually slowing contraction by World War I and World War II, respectively. Then, due to a slump, the number of small settlements began to rise which has pushed up gradually the rate of settlements with less than 5,000 or 10,000 people. In this kind of figure, it is worthwhile to have a look at the cumulative population ratios of the different settlement categories, too (See *Figure 3*) While in *Figure 1/C* we could see that the overall number of people living in settlements with 1,000 to 2,000 people has risen until the I. World War, now we can see quite clearly that even this rise has fallen behind the rise in the total population of the country and judging

by its percentage share this category has lost ground even then. It can also be noted that settlements less than 2,000 people lost ground to settlements with more than 20,000 people and this tendency continued up to World War II, although more moderately (when the prime beneficiary was Budapest).



Source: Data from the Central Statistical Office

**Figure 3. Changes in the proportions of people living in the respective settlement categories between 1869-1986**

After World War II, the loss of population in settlements with 2,000 to 5,000 people was rather spectacular, especially in the 1960s; again the beneficiaries were the towns with more than 20,000 people, while the growth rate in Budapest fell substantially.

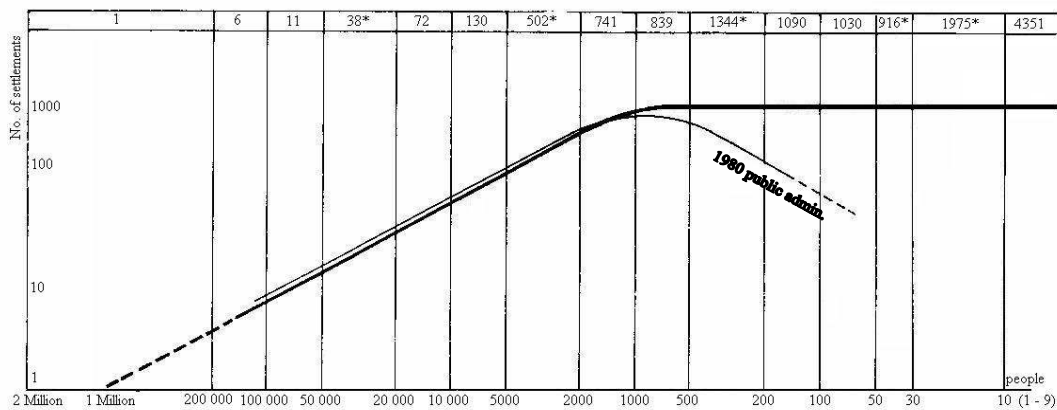
To sum up long-term tendencies, one can state that a monotoniously falling share of people (whose numbers doubled over the past 120 years in the current territory of Hungary) live in small settlements (with less then 2,000 people), although the absolute number of people affected has fallen only slightly, and in minuscule villages with less than 500 people the absolute number of dwellers was perceptibly on the rise over the past 30-40 years. Therefore, the issues of supplying small settlements and the living conditions of the villagers involved cannot be regarded as either new or waning over time.

### 3. REGIONAL TENDENCIES IN THE DEVELOPMENT OF THE SETTLEMENT NETWORK

Although attention has not been called to this specifically, the statistics used up till now was dealing with populations in settlements as defined by the prevailed public administrative pattern. The number of settlements involved did not changed much for a long while. In 1900 there were 3,265 settlements in the current territory of Hungary; in 1860 the number was basically the same, while on Jan. 1, 1986 the number was to 3,064. Over half of the settlements (53%) had populations of less than 1,000; and 7.4 of the total population of Hungary lived in these small villages which in absolute numbers implies 790,000 people.

However, prior to drawing the conclusion that only so much people are affected by the consequences of living in these small settlements (such as deficient supply), the following facts should be considered, which are supported by the data of the 1980 census. [2] [4]

Any settlement comprises an inner and an outer area in a public administrative sense. The inner areas always contain a so called core, which is often supplemented by a so-called "other inner area" (precisely in 692 cases). All "other inner areas" are separate from the "standard inner areas"; they are usually vestiges of some other settlement merged the 'parent' one that have lost their public administrative status altogether and more often than not their name as well. (These are not to mistaken for settlements that have been deprived of their councils but not their public administrative status: they are still included in the statistics.)



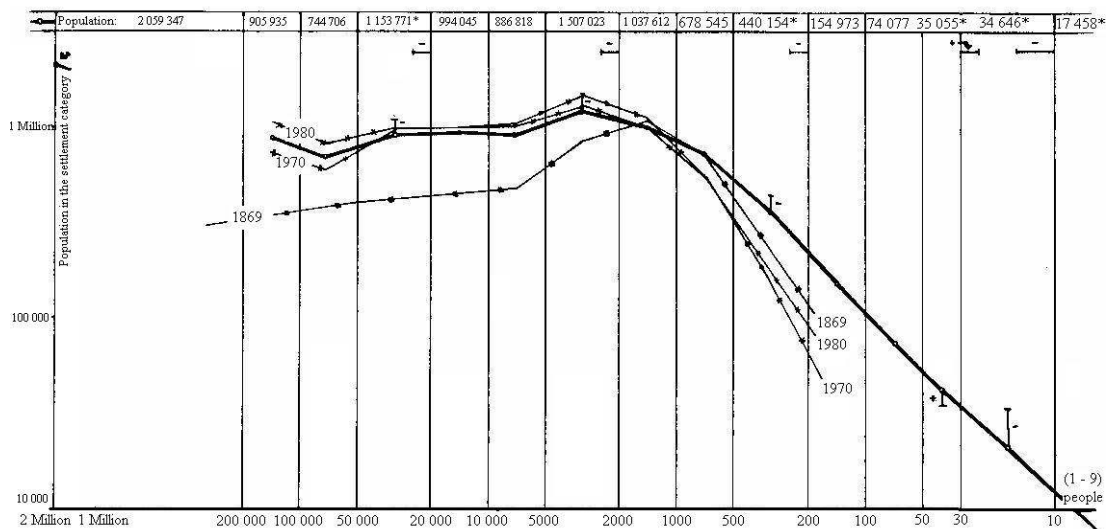
The thick line in the graph that reflects the 1980 entire settlement pattern. The relative values have been indicated in the heading as well. The values marked with asterisk (\*) had to be corrected so that the values to be plotted should refer to the uniform ranges of settlement categories (with their doubling population numbers) thereby rendering the figures comparable.

Source: Data from the Central Statistical Office

**Figure 4. The number of settlements in the respective settlement categories**

Hereinafter, the opportunities offered by such statistics will be utilised and standard and other inner areas will be dealt with separately, with inhabited outer areas as "independent settlements in the sense of municipal geography". Obviously, villages regarded as homogeneous units will be split up; even the inner areas themselves may fall into a smaller population category, although the category of minuscule settlements is also swollen by the total of inhabited 10000 outer areas. (In 1980, 4716000 people lived in outer areas, while 266470 people lived in "other inner areas".)

In *Figure 4*, the horizontal axis is used to indicate the population categories of settlements on a logarithmic scale, while the vertical axis is used to indicate the number of settlements in the respective categories, also on a logarithmic scale. A thin line has been used to chart the values taken from the 1980 statistics based on a public administrative approach to settlements, while a thicker line has been used to depict the series of data calculated on the basis of the municipal geographic approach, discussed above. (It is to be noted here, that a doubling of population numbers was accepted as the unit of measurement on the logarithmic scale /ie. 5000 - 10000, 10000 - 20000, etc./.) Since the 200 - 500, 2000 - 5000, etc. categories are 25% (percent) wider than that, the respective values have been divided by 5/4 before they have been included in the graph. (A similar correction had to be made at the lower end of the scale in the case of the 1 - 9, 10 - 30, etc. categories.)



The thick line is the graph that reflects the 1980 entire settlement pattern. The relative values have been indicated in the heading as well. The values marked with asterisk (\*) had to be corrected so that the values to be plotted should refer to the uniform ranges of settlement categories (with their doubling population numbers) thereby rendering the figures comparable. Since in this chart the horizontal and the vertical scales are identical, the "+" or "-" in heading shows the measure of the value vertically had to be corrected

Source: Data from the Central Statistical Office

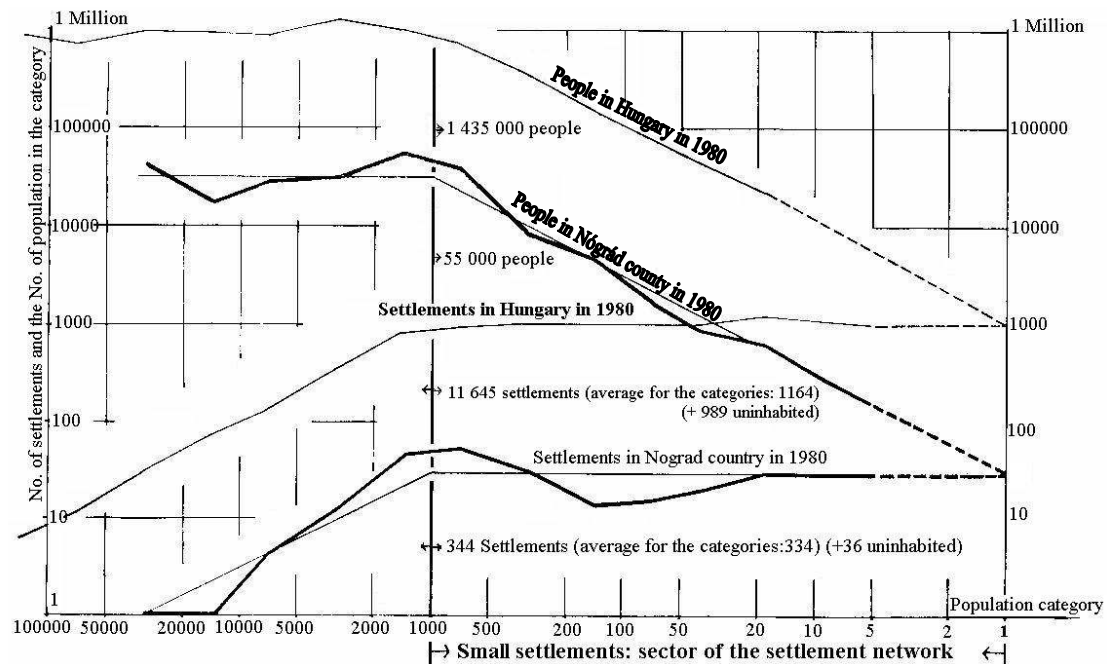
**Figure 5. The number of people in the respective settlement categories**

The astonishing result to be seen is that in the categories of settlements with less than 1000 people, the number of settlements falling into one grade is approximately the same, while the number of settlements with more than 1000 people is falling at an even, linear pace (in the log-log scale).

If, however, the same scale is used to chart the *population* in the respective categories (as in *Figure 5*, thick line), the chart seems to be "flipping": the graph for settlements *over* 1000 people approaches a constant horizontal value, while in the case of settlements *below* 1000 people it shows a well perceptible, linear tendency. In *Figure 5*, data from the municipal public administrative statistics for 1980 and 1970 have been indicated with a thin line, along with the series of data for 1869, when Budapest still constituted an integral part of the settlement network (while the network as such did not represent a self-contained unit, as separated from the rest of country's territory).

#### 4. VERIFYING FINDINGS IN RESPECT OF A COUNTRY

For comparison's sake, the relationships arrived at in respect of settlements in the sense of municipal geography were specifically analysed in Nógrád country (*Figure 6*), using the 1980 data that were the only ones available.



**Figure 6. Settlement and population distribution by population categories across the entire settlement network: Nógrád county and the total of Hungary in 1980**



Although spreads are greater due to the smaller number of settlements in the respective categories, tendencies distilled for the whole of country can clearly be identified without stretching the lines. So, the following pattern of tendencies can be formulated in respect of Nógrád country, while bearing in mind the concurrent national values as well.

The average number of settlements with less than 1000 people was found to be 34 (also assuming the doubling of population as the unit of measurement), while the declining line, indicating the number of settlements with more than 1000 people, intersected the axis at 33000.

If the same chart is used to indicate population numbers, the two graphs will intersect each other at settlements with *one single inhabitant* (since this is the point where population numbers coincide with settlement numbers). Above that point, population numbers rise incessantly in the model, and reaches 33000 people approximately at the category limit of 1000 people. From then on, it continues with this constant value.

*As for the whole of the country*, the break-points are the following: settlements with less than 1000 people number exactly 1000 if counted category by category, while the straight line of bigger settlements intercepts the horizontal axis at about one million. The number of people per unit of settlement categories is exactly one million people in the case of the population numbers over 1000.

## 5. SUMMARY: THE OUTLINES OF SETTLEMENT NETWORK PATTERN

Now, I would like to underline those aspects of the model's findings that affect small settlements. The first statement to be quoted here is that the marked break-point, which separates settlement ranges with different spatial arrangements, noted in the settlement network model implies a natural isolation of "small settlements".

We have found that settlements with less than 1000 people dot space with an even density and presumably in a random distribution. For the time being, the new question to be formulated is this: what are the historic, geographical, and social phenomena that resulted in the isolation of the two ranges of settlements (or their patterns)?

Nevertheless, prior to attempting a more complex understanding of the causes of the phenomena, it seems to be quite rational to draw the line at 1000 people for the definition of "minuscule" villages. (at present, different researches draw the line either at 500 people, or at 1000 people.) It is to be noted that while most of the well-know demographic signs of the minuscule village syndrome (such as the reduction in population numbers, the ageing of population, the migration of young people away

from such villages, etc.) as well as the exodus of institutions or the absence of development or investment projects have been found to be the most spectacular, but inseparable element of the processes affecting the settlement network or at least the village network (that is why any definition of limit is incidental), whereas the phenomenon noted recently indicates a marked division in the settlement pattern, which is quite the opposite of the results of the first analysis.

The consequences of this phenomenon should be reflected in the development policy through follow-up research; my assumption, for example, is that the supply principles based on regional hierarchy may not be applied to the lower range of the settlements.

Conversely, the distribution of settlements with *more* than 1000 people differs from that of the smaller ones, but also follows set and strict rules. I presume that this is the only range of settlements where settlement nodes have emerged on the basis of the inter-settlement equilibrium principles. The number of such nodes falls in proportion to the growth in their respective sizes (as we have seen, the shape of the density function shows linear growth on a logarithmic scale).

To give a different interpretation to my assumption I would say that the distribution of population in the small villages follows some fundamental supporting capacity of the land. The location of populations in space, in excess of this fundamental supporting capacity of land (15-20 people/sq.km) is in no way incidental, but only such greater population densities presume the emergence of a higher-level, inter-settlement division of labour. (Such functional principles of supply organisation, such as the Christaller principle, are well-known; moreover, in the 1971 concept for the development of the settlement network they were given (an almost exclusively) predominant role. At present, I do not wish to hit upon these principles, I merely hypothesize about a possible new way to outline how they find reflection on the basis of the model experiences.

And last but not least, the model differentiates a third stage as well in the settlement network. The biggest settlement is linked to the settlement range, discussed above, showing a linear decline not over a break point but over a specific rupture. My assumption is that so long as development, following rather strict rules is governed primarily by inter-regional influence among the settlements in the above phase, the challenges affecting the center from outside the region would have a special growth generating impact. It is especially evident in respect of the capital of Hungary that it represents a singular unit in this interrelationship which is totally different from the organic development of settlements.

Of course, the hypothesis, outlined above could be faced with further justification, reinforcement or negation. I myself would like to continue to work on it in gen-

eral, and on the identification of the causes for such regularities in particular. Nevertheless I would venture to say even at this point that in case these empirical findings are going to be supported, we will obviously acquire a hitherto deeper knowledge of the underlying regularities. Thus, conditions will be available for establishing the foundations of a development policy with whose assistance we could do away with our current methods of analysis which relies on the necessarily distorting approach based on the public administration pattern.

#### REFERENCES

- [1] Demographic properties by categories of settlements (1900-1960) Publications by the Population Research Institute, Vol. 22, Budapest, 1968
- [2] The 1980 census, Vol. 30, Data about the population and flats by categories of settlements, Central Statistical Office (=CSO), Budapest, 1982
- [3] Regional Statistical Year-book, 1985, CSO, Budapest, 1986
- [4] The 1980 census, Vol. 1/a, Data about the Budapest districts and the outside areas, CSO, Budapest, 1981

*August, 1987.*



